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AUTHOR Tate, Ormond
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ABSTRACT

The New Zealand Correspondence School has taught nearly 750,000 students since it was established in 1922. Indicators of success are student achievement, parental satisfaction, and cost per student. Possible models for basic distance education are as follows: (1) isolated students learning independently; (2) a partial intermediary who provides organization, encouragement, and supplementary teaching; (3) an intermediary or teacher supervisor as a necessary element; and (4) a combination of 2 and 3, with the intermediary working with several individuals or groups sequentially or a large group simultaneously. There are great variations in the coverage, quality, and the state of communications in countries. People can sometimes be the most convenient, available, and cheapest medium of communication. Common educational problems in many countries include insufficient financial and technological resources, insufficient or inadequate school buildings, teacher shortages, teacher quality, and inequitable access to education for women. A procedure has been proposed for establishing productive dialogue between distance and state educators to develop distance education or multichannel approaches to meet one or more country's specific school level, basic vocational, or community educational requirements. Three stages of this process are visits to each state, regional planning meeting, and regional workshop. To ensure an effective system, regular monitoring is essential. (YLB)

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It Works !
Practical Possibilities of Basic Distance Education

Ormond Tate
Director
The Correspondence School
Wellington, New Zealand

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Some Quotations

1 "Distance education is not widely used at primary level to teach young children, because they need close contact with a teacher to help them learn, but is used to teach primary level education to adults. The radio schools of Latin America are good examples of primary level adult education at a distance.

"Distance education has been widely used at the secondary level. Examples of 'schools' teaching secondary level courses at a distance include Hermods–NKI Skolen in Sweden, Radio ECCA in the Canary Islands, the Air Correspondence High School in South Korea, the Schools of the Air in Australia, the Telesecundaria in Mexico, and the National Extension College in the United Kingdom."
Walter Perry and Greville Rumble, A Short Guide to Distance Education
International Extension College, London

2 "Besides these two worlds there is a third, where DE must be used to augment and expand the provision of primary and secondary education. ..... The advanced countries also use DE to reach particular groups in order to achieve certain national goals. The Canadian province of Ontario has created a DE network in its vast northern region to help equal opportunity there. .... Many countries use DE for upgrading school teachers in new curricula and methods."
Dr John S Daniel, Distance Education and National Development, ICDE Conference, Oslo, 1988

3 "Britain is experiencing a huge teach-your-own-children boom. In 1977 a mere 10 families educated youngsters at home; today, more than 12,000 children from 5,000 families are being kept off school by parents who believe they do a better job than teachers.

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Experts believe the number of children not attending school will increase even more dramatically. Ronald Meighan, Professor of Education at Nottingham University said: That's exactly what's happening in the United States, where there are now 1.5 million families educating at home. ... Not all children are at home because they dislike school. A growing number are taught by parents because schools will not have them ... and the National Union of Teachers estimates that 25,000 children are barred from school."

The Observer Sunday 18 October 1992

4 "To meet the enormous growth in demand for education, California has to build 22 classrooms every day for the next five years – but has already run out of money."

The Australian, quoted in New Zealand Sunday Times, 25 October 1992

5 "More than 100 million children, including at least 60 million girls, have no access to primary schooling ...

- The main delivery system for the basic education of children outside the family is primary schooling ...
- The basic learning needs of youth and adults are diverse and should be met through a variety of delivery systems ...
- All available instruments and channels of information, communications, and social action could be used to help convey essential knowledge and inform and educate people on social issues."

World Declaration on Education for All, Jomtien 1990

Definitions:

1 **School Level Education** incorporates provision for basic learning needs as spelt out in the Jomtien World Declaration on Education for All.

It means:

- ensuring universal access to relevant primary (elementary) level education
- improving the quality of primary education.

It also means:

- extending the education of children and youth into the secondary (junior high) level
- extending and improving the quality of literacy, mathematics, general science and introductory technology, social and cultural studies, history and geography, introductory commercial studies, and home economics

- increasing the percentage of students, particularly girls, who learn at the secondary level and achieve satisfactory standards.

ii **Basic Vocational Education** means the level of technical, scientific, commercial and economic knowledge and skills that can be studied following on from two years of secondary education.

It means:

- Vocational education at apprentice trades and general handyman level
- increasing student's ability to learn about and benefit from technology, science, and economic developments
- increasing student's ability to help establish and maintain effective systems and procedures
- development of people equipped to provide para trade and para technician services and elementary technology skills necessary to support and improve community and individual life.

iii **Community Education** incorporates provision for basic learning needs for adults as spelt out in the Jomtien World Declaration on Education for All.

It means:

- providing adult and youth education, in the context of their local life and culture, the equivalent of relevant knowledge, skills and understandings that are taught at school level
- improving adult literacy, numeracy, life skills, and knowledge of child care, health and hygiene, protecting the environment, and useful practical scientific, technological and economic understandings.
- improving access of adults and unemployed youth, particularly women and girls, to education that will improve the quality of their life and the life of their community
- empowering women to play a more active and effective role in the education, health and well-being of their families.

PART A: IT WORKS!

Working Pragmatically

Distance Education at a basic level works. Despite the opinion of Perry and Rumble quoted above, there is no question about it. Basic distance education has worked, does work and will continue to work well in many countries and situations. For example, in the years from 1910 to 1925 correspondence schools were established in New Zealand, most Australian states and most Canadian provinces to provide school level, mainly primary education. These distance education schools are still functioning successfully today. All have changed and adapted over the years, but the fact that they have persisted is evidence of practical success.

The New Zealand Correspondence School has taught 3/4 million students since it was established in 1922. It is estimated that one person in six alive in New Zealand today was taught by the school at some time in their lives. Basic school level distance education also works in countries in Africa, Asia and Oceania.

Indicators of Success

How can we tell basic and school level distance education works?

1 **Students Achievement**: Students can achieve very well learning at a distance. There is plenty of anecdotal evidence that young primary age students transferring from The New Zealand Correspondence School to other conventional schools are well advanced in reading, writing, mathematics, understanding instructions, problem solving, persistence and concentration. Correspondence School secondary students' results in national public examinations have consistently been as good or better than the national average, despite a high proportion of disadvantaged students. *(see appendices)*

2 **Parental Satisfaction:** Questionnaires to parents show considerable satisfaction with the quality of education both teaching and support provided by The New Zealand Correspondence School. A 1989 Heylen Poll of Correspondence School parents' opinions compared very favourably with the same poll of New Zealand adults: "Parents were uniformly confident, across preschool, primary and secondary areas, that The Correspondence School offers better facilities and services than face-to-face state education. The number who did not know or made no response is quite high. Of the remainder, an overwhelming majority consider their school (The Correspondence School) to be as good or better than face-to-face state education (91% preschool, 96% primary, 96% secondary parents) .....

"It appears that Correspondence School parents have greater opportunities to learn about the education system in New Zealand than others. As well, probably of necessity, they are most closely involved in their children's education and hence their school."

A 1992 parent questionnaire showed that in all four main areas surveyed (primary, secondary, early childhood, special education) parents are very satisfied with The Correspondence School system. They said it is well run, easy to work with programmes, teachers and teaching, and student support and guidance are good. It is "quality schooling plus".

There was a very positive response to effectiveness of and satisfaction with communication, help and support methods. 85% indicated that this helped parents to supervise more effectively and students to learn more successfully.

A further indicator of parent and public satisfaction with the school level distance education provided by The Correspondence School is the pressure on the rolls. The early childhood roll at present is capped at 510 but there is a waiting list of 200. The adult roll is controlled by funding to 8500 students, but there are at least 4000 others who would study at basic and school level if they could.

3 **Cost Per Student:** Distance education can be less expensive to provide than face-to-face education. For many years The Correspondence School **non-capital operating** expenditure per student has been equivalent to about three-quarters of the cost of educating students in classrooms in conventional state schools.

Annual Operating Costs in $NZ per Pupil

	Financial Year							
	1980/1	1981/2	1982/3	1983/4	1984/5	1985/6	1986/7	1987/8
Pupils Attending								
State Primary	$820	1024	1145	1196	1244	1433	1754	2160
State Secondary	$1606	1634	1849	1855	1956	2234	2911	3185
Correspondence School (all pupils)	$959	1114	1238	1260	1553	1725	2087	2288

The Correspondence School roll is 70% secondary in terms of full-time equivalents. When capital expenditure is included the 1986/7 cost per pupil in state primary schools increases by $110 per pupil and in state secondary schools by another $240 per pupil, but capital costs are much lower for Correspondence School students. It would have cost an extra $4,860,000 in operating costs in 1986/7 to educate all The Correspondence School students in state primary and secondary schools.

The New Zealand Correspondence School consistently has educated students at less cost to the state than conventional schools, eg more recently in 1991 **operating costs only** per equivalent full-time student (EFTS) in conventional New Zealand state schools **(not including capital costs and major maintenance)** compared with **total costs** (including operating, capital and major maintenance.

Total Cost per EFTS in Correspondence School 1991		**Operating** Cost per EFTS in state schools 1991
Primary	$NZ 3295	$NZ 3100
Secondary	3793	4600
Early Childhood	2627	3236

Basic distance education requires a variety of courses, resources, media, transmission methods, and organisations, to offer a realistic range of courses to meet individual differences and to provide choices to students. These can be costly in staff time and materials, but can be provided economically given agencies that are large enough and sufficiently well-organised to generate economies of scale. Distance education can be very cheap and cost effective, reducing costs per student by as much as 50% to 75%. Admittedly establishment costs and preparation time can be high in distance education but with good materials and efficient reliable systems, the unit cost per student reduces with numbers of students. Preparation time can sometimes be shortened by purchasing or adapting suitable resources that have been used successfully elsewhere.

Distance education is economical for students, who can live at home, have no travelling time or costs and can fit study into their non-working time. It is a very economical option as a means of retraining for both learner and employer. Students can remain in their jobs and do not have to relocate to retrain.

Families and/or the community can't help but be involved in distance education as supervisors, providers of facilities, motivators, discussants. Parents or supervisors are involved in children's lessons and learn with them. They see the lessons and the teacher's comments; they are aware of what the children are learning and the progress they are making. They learn something about how to teach and how to use resources. In New Zealand many parents learn with their children; others are stimulated to learn ahead. Distance education has a flow-on effect.

Distance education also has the potential for educational spin-offs for parents, family and community as well as teaching the students. It has the potential to mobilise the interest and participation of communities and society and to alert them to the importance of universal primary education. Distance education has a much wider educative impact than just the target students: The Correspondence School 20 minute daily radio programmes broadcast nationally have a surveyed listening audience of 50,000 to 70,000 people, approximately three times the school roll.

PART B: SOME PRACTICAL POSSIBILITIES

Multichannel Approaches

There is a tendency for some to think of distance education as separate and mutually exclusive to conventional face-to-face education. This is not necessarily the case. It is not a discrete form of education that has to be used in its entirety, only by itself. Distance education has great flexibility and can be used in conjunction with face-to-face education, to complement and supplement it. It can be used instead of conventional face-to-face education, or in conjunction with a great variety of community networks. Distance education can be used as a precursor to formal classroom schooling or after it. It can utilise all types of media, can provide information virtually to everyone everywhere, using traditional or non-traditional, formal or non-formal, methods, channels and structures.

The New Zealand Correspondence School has for fifty years provided curriculum support and extension for secondary schools through its Schools Open Learning Service.
This year one-third of the students on The Correspondence School roll are attending other secondary schools. The Correspondence School teaches secondary students when the base school

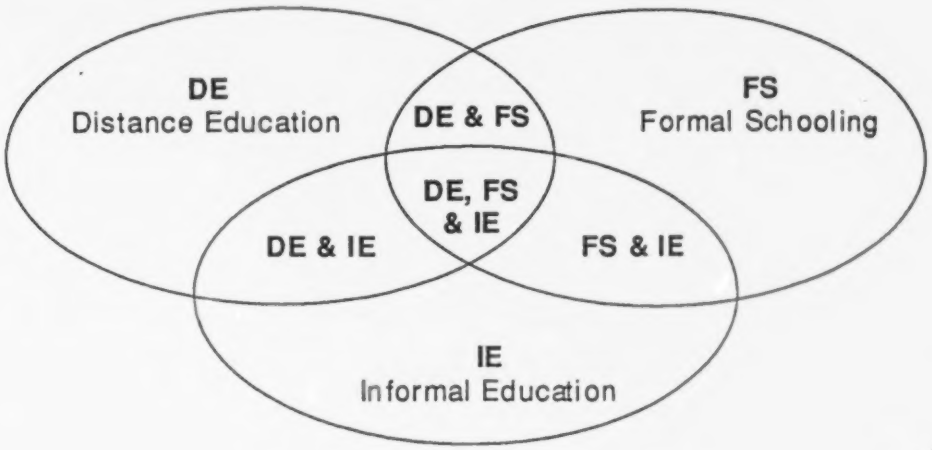
- is unable to provide a full range of subjects, because it is too small or does not offer a subject
- loses a specialist teacher suddenly
- has staff shortages.

Each base school is allocated a Correspondence School liaison teacher to help with any queries or problems. Liaison teachers visit base schools to establish personal contact and to offer support. This service benefits over 95% of New Zealand secondary schools and ensures that secondary schools can give all their students equal access to educational and vocational opportunities.

Students are supervised by teachers, teacher-aides, librarians or administrative staff in libraries, in the back of other classes, or in study rooms. The South Australian Open Access College, and other Australian and Some Canadian correspondence Schools provide a similar support service for conventional schools.

Distance education is also used in The New Zealand Correspondence School to teach basic adult literacy and English for speakers of other languages with the help of non-formal groups who provide volunteer helpers to work individually with the learners and distance education materials.

There are many possible combinations:



Basic distance education can be used with conventional schooling

- using the buildings out of conventional school time
- using school staff to supervise or mark work
- using basic distance materials for individual student study in conventional schools to increase class sizes
- for summer school programmes to enable children to catch up

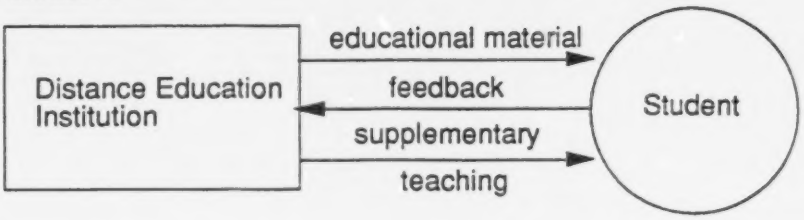
The International Multichannel Action Group for Education, IMAGE, being established under the auspices of ICDE, UNICEF, UNESCO, USAID and other organisations, plans to use all of these approaches to achieve the spread of basic education.
Some possibilities are discussed below:

1 **Some Models**

There are a number of possible models for basic distance education, of which some main ones are described below.

a **Model A involves isolated students learning independently**, using educational materials provided by an institution, with varying degrees of feedback from the student, and supplementary teaching by teachers at the institution. This model applies particularly at tertiary level, but is also used at secondary and primary levels.

Model A



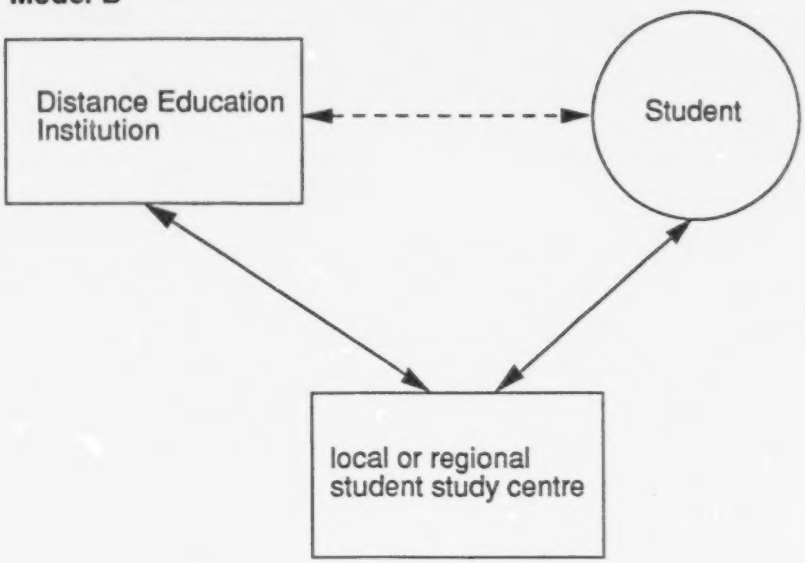
It can be very successful where students have prerequisite educational skills and knowledge, are personally motivated and do not experience strong personal, family and social pressures, that disrupt their study. In societies that emphasise individual responsibility for achievement this model can work well. If rewards of education and improved qualifications are real and obvious then students can be motivated and succeed. While many reports indicate high initial drop-out rates with this model, if the teaching institution has a well-developed student support network, using postage, telephones and electronic mail, and remedial teaching materials and methods, students can be encouraged to persist and do achieve well. Occasional block courses or weekend face-to-face seminars can be used to provide specialist teaching and personal contact and support.

b **Model B**. In developing countries the most appropriate models for distance education at the school level include or combine elements from the models given below. Intermediaries or supervisors are an essential element in each model, although they may have different roles in each. Alan Dodds paper, *The Surrogate Teacher: The Roles of the Intermediary in The New Zealand Correspondence School's Teaching System*, discusses some ways intermediaries are used successfully.

The second model introduces the idea of a **partial intermediary, who provides organisation, encouragement and supplementary teaching**, based in student centres where students work with resources and in groups, and get some counselling and support. Students gain support from each other through working together in groups, and this is important in many societies.

Study materials can be economically used in groups and students kept up to schedule in their studies.

Model B



In Papua New Guinea the College of Distance Education has a presence in each of the provinces. This involves an office for the provincial co-ordinator, resource storeroom and study room, with a house above for the co-ordinator. Students come to enrol, to drop off completed lessons, pick up further lessons, get help from the co-ordinator, use reference books and tape recorders. The co-ordinator arranges delivery of printed lessons to villages using library deliveries, tea and coffee pick-up and delivery contractors and co-operative village transport. The co-ordinator also arranges for local teachers to mark student work on an after-school contract basis.

In other countries, such as Korea, distance students gather at a local village or town school on a weekend day when there are no regular classes. They are given some teaching, demonstrations, help, and have some access to the school equipment. The supervisors can be local teachers, retired teachers, religious leaders, or local professionals or leaders.

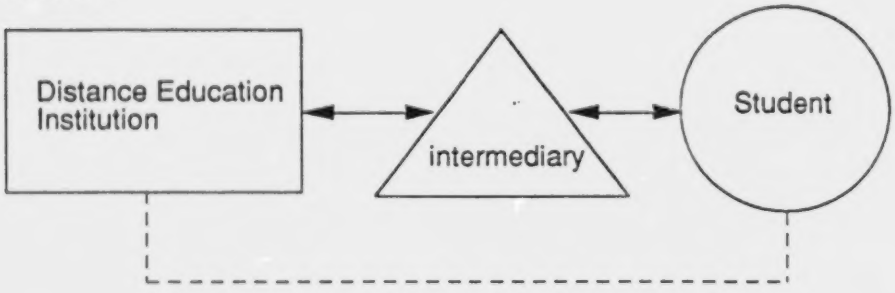
The main feature of this model is that students gather and the supervisor is mainly concerned with organisation and student support, rather than teaching. The teaching is done primarily by the distance education course materials and media. However, the teaching involvement of the supervisor/intermediary depends on many factors and varies in different situations.

c **Model C.** The third model introduces an **intermediary or teacher supervisor as a necessary element** for successful distance education with young children, or people who are illiterate or unschooled. The supervisor is much more involved in communicating, interpreting and teaching the distance education materials. He or she:

- organises the students, materials and environment
- reads, shows or plays resources such as print materials, tapes, radio, TV and tells students what to do;
- tutors;
- assesses students progress, and judges when to move on'
- provides feedback to students.

The supervisor may also need to be trained in such things as child development, and the basics of mathematics learning or teaching reading.

Model C

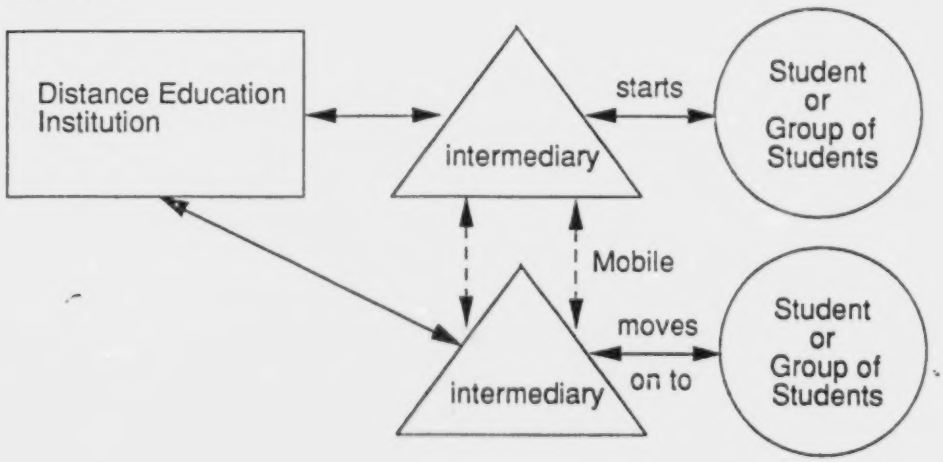


In Zambia the National Correspondence College operates Open Secondary Classes for groups of adolescent youths 'squeezed out' of formal schooling by examination sieves. The youths gather at available buildings for limited hours each day to do their correspondence lessons, under the guidance of a supervisor. When printed correspondence materials are short students share them. If the materials are in very short supply the supervisor reads them to the students and uses a chalkboard. The supervisor organises the students to do the lessons according to schedule. In this type of model students are enrolled with and sit tests and examinations set and administered by the national body.

This model is useful in teaching illiterates, people with little education, foreign language speakers and young children. It is used by the correspondence schools in New Zealand and Queensland for preschool education, where the materials are designed specifically for the children's parents, almost invariably the mother. It is also used in New Zealand, Australia and parts of Canada for teaching primary (elementary) school children at a distance. As the children become more literate and able to learn directly from the course materials the intermediary becomes more of an organiser and the model moves back to B and possibly eventually to A with no intermediary involved.

d **Model D.** The fourth model combines elements of B and C, with the intermediary working with several individuals or groups sequentially, or a large group simultaneously.

Model D



This model, like B, is used when students are not quite sufficiently literate to cope alone, but with some help and interpretation of the materials they can learn independently for a period. They need to have topics introduced and opened up, some help with understanding teaching or what is used, and have topics introduced and opened up, then the topic reviewed later.

The difference from B and C is that the intermediary supervisor moves from student to student, or group to group of students, around a local area or region. The supervisor has some form of transport. Occasionally larger groups may gather for significant occasions, eg starting a course and delivering materials, testing or awarding certificates of completion.

- Applications of this model often involve using a cadre of trained or partly trained teachers. Sometimes there are two or more intermediaries.

2 Comment

In developing countries models B, C and D may be the most appropriate. Not all learning has to be supervised, but the supervisor has to see that individual learning is done, and know the main points to emphasise. Supervisors have to be trained in the use of distance education materials, and in the rudiments of learning and teaching from them.

Intermediaries/supervisors can be drawn from: parents; community elders; unemployed young people; older people; local administrators; partly educated people; local or central government advisory officers; religious leaders.

3 Communications

There are great variations in the coverage, quality and the state of communications in countries. Distance education depends on communication between teacher and student. The success of trial distance education projects and subsequent regional and national initiatives will be contingent on good and reliable communication.

- The postal system must be reliable, not too slow and not too expensive.
- There must be electrical power reticulation for radios, cassette recorders and television.
- Radios, etc, have to be available at an affordable price.
- Batteries must be available and not too expensive.
- The telephone system must shave good coverage, work efficiently and not too expensive.
- Roads, rail or river transport must be able to transport people and bulk supplies of distance education materials.

The design of distance education projects is affected by the state of these means of communication. There are often informal or private communications networks that can be used, eg those of other government agencies, large organisations like transport or bus companies, railway signalling, private companies, banks.

The technological infrastructure of a country has also to be taken into account in designing distance education projects. Sufficient numbers of people who are able to repair and maintain equipment, and money to pay them and buy replacement parts, are necessary. The availability of paper, parcels, books and equipment is also important.

Cadres: People as Communication

People can sometimes be the most convenient, available and cheapest medium of communication to use in distance education. They can be used in several ways:

i a para-teacher or monitor, who receives the distance teaching materials and reads them, etc, as intermediary as described above in Model C. These people will themselves have to be educated for their role, probably by distance education.

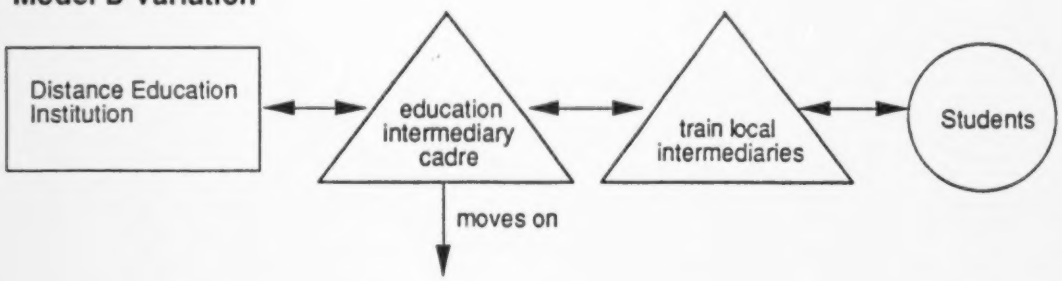
ii A cadre of people who are trained in a central originating education agency, travel to a local area or region and then use distance education in that area as on Model D.

In both models the intermediaries have to learn:

i the material they will teach to the pupils

ii how to use the distance education materials, how to teach from it, assess pupil work, help with difficulties and provide feedback both to students and to the distance teaching institutions.

Model D Variation



In Pakistan Allama Iqbal Open University trained a team of staff on campus in Islamabad, who then went to live "out in the field", ie at small towns, whence they travelled by jeep to villages, staying several nights during each visit. In the villages, the field workers introduced their programmes and motivated the villagers to undertake them. They then trained some of the more educated inhabitants in each village to run the programmes, and returned frequently to support these 'teachers'. the programmes they offered were of two types:

i **Pre-literacy Programmes:**

These covered topics such as health and hygiene ("what to do when your baby gets diarrhoea"), animal husbandry, agriculture, etc. They are delivered by use of tape recorder and accompanying flip charts of simple line drawings. A village would need minimal training to run such a programme. It is reported that a 40% difference in infant survival rates followed this programme in one area.

ii **Literacy Programmes:**

These involved more training for the villagers who ran them, and the provision of more resources in the form of books and paper and pencils: slates were being used in one village. Classes of about 35-40 women included young girls and grandmothers. This form of education for women was acceptable to Muslim villagers because it meant women were not leaving the village or mixing with strangers.

Women who had been studying in their literacy programme for up to five years were emphatic about its benefits. It was interesting to note that several of the university graduate field workers were themselves the products of villages equally as poor as the ones visited.

A similar distance education project was observed in Indonesia, where a cadre of teachers took community education programmes to rural villages, using demonstrations, diagrams and simply worded pictorial cards. Topics included childcare, hygiene, simple medical actions, agriculture and community support.

4 Other Issues

Common educational problems in many countries include:

a insufficient financial and technological resources for education

b lack of capital investment, insufficient school buildings, inability to keep pace with repairs and maintenance on buildings or replacement buildings

c insufficient numbers of teachers

d inadequately educated and poorly trained teachers

e inequitable access to education for women and girls.

In quite a number of countries formal basic and school level education is so unsatisfactory that governments are saying they do not want more of the same.

4 A Insufficient Financial and Technological Resources

As indicated above, distance education can be considerably less expensive than conventional face-to-face education because:

- there are lower capital costs, less school buildings to be built, less land to be purchased, less equipment to be provided
- there are lower maintenance costs, and upkeep and damage is less
- available buildings can be used outside predominant use hours, eg local co-operative buildings, village and community halls, church halls.

However there has to be well-planned efficiently organised and monitored systems for:

- devising and producing distance education resources
- distributing them to students schools or study centres
- retrieving and marking student work and returning it.

Considerable economies of scale are possible if resources are centrally planned, developed and written, and student numbers are high.

While able and experienced teachers are needed to develop distance education resources, quality education administrators are needed to organise and manage distance education activities. The use of supervisors, para-teachers and people in the community to organise and supervise students, means that overall staff costs can be less than in formal schooling. This means money goes further in distance education, into a greater number of students being taught than for the same financial commitment in face-to-face education.

4 B Insufficient or Inadequate School Buildings

Distance education can be organised so that students learn and supervisors teach in a variety of existing locations ranging from homes to community meeting places, church or religious buildings, or unused commercial buildings. Buildings can be used by several groups at once or with scheduled times.

Use of existing facilities means that more of the financial resources able to be used on education goes into teaching and learning and less into capital investment in buildings and land.

Distance education can enable multiple use of school buildings even when teachers are short as in 4C (c) below.

4C Teacher Shortages

Use of distance education materials and methods can allow teachers to spread their expertise more widely and cope with larger numbers with the assistance of non-teachers, eg young potential teachers, para teachers (partially trained or apprentice teachers), older people. Various strategies which can be employed include:

a using assistants to bring a teaching staff up to full complement, by having them supervise each class for a day on distance education as in Model B above;

b teaching larger classes if buildings permit, with some students using distance education resources, possibly with the help of untrained assistants, some or all of the time;

c teaching two or more groups using supplementary distance education methods/resources, eg one group attends regular school in the morning, and then they work on their supplementary distance studies at home or in a supervised study centre in a community facility in the afternoon. the other group attends school in the afternoon and does their distance education extension at home or elsewhere in the mornings.

d supervising other children working on distance education materials as a separate unit in a class they are teaching. In this way coverage is given to specific subjects or levels where there is teacher shortage/absence, eg year 5 teacher and class with part of a year 7 class studying by distance education.

e gathering in larger groups if possible for radio, audio tape, and/or video programmes produced and disseminated from a central resource centre. These radio programmes may be predominantly one way delivery and teach directly to the students, or they may use the teacher as interactive intermediary.

4 D Teacher Quality

Teacher shortage is often associated with insufficient quality teachers. Using distance education to improve teacher quality has several advantages. Teachers can undertake in-service training on the job, reducing the time away from their schools. They can also use distance education materials of the highest quality, prepared by the best teachers, to help them in their teaching. The expertise of the best teachers is thus made available very widely to the benefit of thousands of students.

Distance education can be used to effectively and inexpensively improve the quality of teachers by:

a improving teachers' knowledge of the subject matter they are teaching, eg by studying mathematics to a level such as University Entrance, so they understand the content they are teaching:

b improving teachers' knowledge, understanding and organisation of teaching by providing through distance education:

- i exemplar lessons showing what to teach, in what order and steps, to what breadth and depth, the main ideas to emphasise, teaching methods, and what activities and exercises to give students;
- ii specified objectives; detailed course plans with the year's course arranged in sequence and divided into terms; and assessment materials.

c improving teachers' teaching ability and understanding of education with:

- i courses for teachers on pedagogy, eg how to teach mathematics or science in the primary school'
- ii courses for teachers in classroom management, planning lessons etc.

d providing lessons for classes using radio, textbooks, audio tapes, video tapes or a combination of these in specific subjects in which teaching is considered to need reinforcing, eg health and hygiene, elementary science and technology. Examples include Guyana which uses broadcasts to schools this way. The Kenya Language Arts Project to improve English standards at primary level and English programme in Lesotho, radio mathematics in Thailand and in Nicarugua.

4E Inequitable Access to Education for Women

In some countries girls and young women often have less access to education than boys and young men as a result of cultural attitudes about the role of women in society. Girls and young women are often required in the home carrying out domestic responsibilities. Distance education is the ideal mode of education to increase female participation rates as it can be carried out in the home through the media discussed elsewhere. As well as literacy programmes, courses in health and hygiene, child development and parent education can be taught and learnt.

In some cultures women and girls are sheltered and restricted in participation in some activities. Groups of women and girls can gather in certain circumstances and study through distance education as a group, or individually with interaction and help from others. Education of women and girls is a tremendous investment in any society.

Home-based early childhood education can also be successfully delivered through distance education, as the New Zealand Correspondence School can demonstrate.

5 Informal Education

In many countries and societies there are structures of administration and networks of communication, apart from the formal education system. These may be, for example, for local government, ranging from village elders and people of prominence, with communication links for administration, regional health workers, local agriculture advisers or produce collectors, or water distribution people, or community organisations, churches or religious groups.

Such structures and networks are important to local people as their work is of immediate and obvious relevance to life and welfare. The people and networks often have an educative role in the community sometimes using distance education materials provided for a more central institution, eg clear, illustrated guides to hygiene or childcare. The providing institution prepares the materials and trains a cadre of staff in methods of using it. They in turn take the materials and methods out to the towns and villages and use appropriate local people as in Model D.

Where there are radios, cassette players, a video or television or even a computer available in a town or village, the message and materials can use these media. A system such as this can be used for elementary schooling and community education, particularly for teaching practical subjects such as childcare and development, reading and writing, arithmetic, health and hygiene.

In other situations, newspapers, local radio and videos can be used individually or together to carry education in planned sequences of lessons. These may be used directly by students in groups supervised by local people, or for the education of teachers or para teachers to help them improve the quality of their teaching.

Examples include the use of study groups, facilitators, readers, constructed correspondence courses, print material, and booklets. Study is in groups or by individuals. Some use radio. Others use regional facilitators/officers, eg Cameroon agriculture courses. There are radio schools, eg in South America. Each radio receiver is a 'school' overseen by a monitor usually in a home for individuals or families. Several levels of administration are possible, eg school, local area or larger region. Informal distance education can be very flexible, open and cheap. It can use multimedia, eg books, booklets, church involvement, non-formal distance education.

Distance methodology on a large scale can reach rural adults effectively and cheaply using group learning systems. Groups of adults undertake regular study, overseen by locally recruited monitors, who organise the group. They work to a small team of field supervisors. Distance education media is simple and cheap to suit illiterate students, eg audio cassette, flip charts, takeaway pictorial handouts, cards, models, materials. The course materials are structured with taped information messages and guidance as well as instructions to learners.

PART C: CO-OPERATIVE DIALOGUE

National Plans and Objectives

Many countries, particularly developing countries facing considerable economic, social and cultural change, have national development plans, or stated objectives.

Education usually has an important place in these plans:

e.g. to achieve economic, social, health, agricultural goals
to increase participation in secondary education
to strengthen mathematics, science, technological education etc.

Plans often involve:

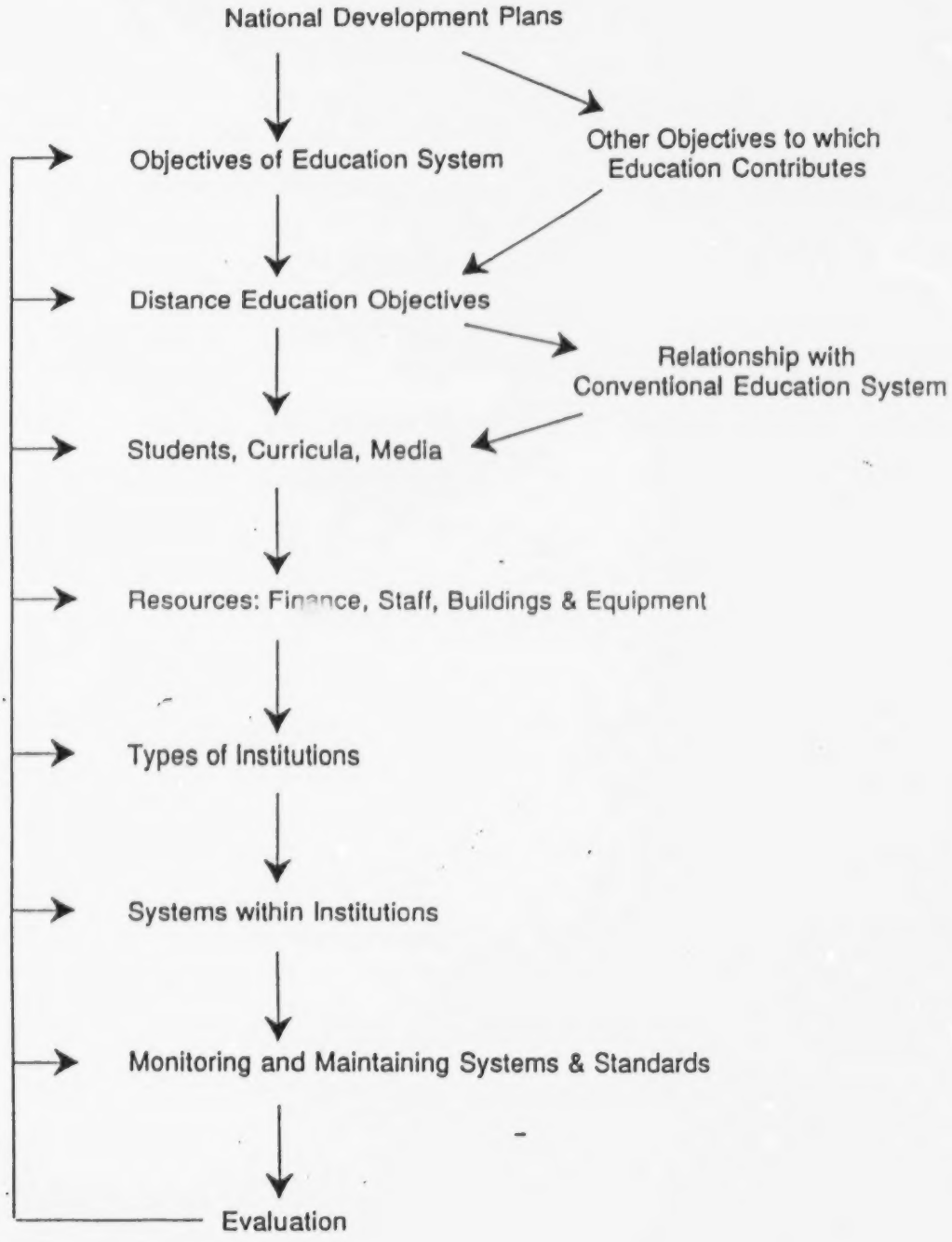
quantitative strategies to improve access and participation;
qualitative strategies to improve the standards of teaching and student achievement;
cost-effective strategies to provide more and better education at less expense.

The Jomtien Framework for Action to provide education for all suggested the process illustrated in the diagram

JOMTIEN FRAMEWORK FOR ACTION PROCESS

Ultimate Goal of Education for All
↓
Intermediate Goals formulated as specific targets.
↓
Priority Action at National Level.
↓
Assessing Needs and Planning Action
↓
Developing a Supportive Policy Environment
↓
Designing Policies to Improve Basic Education
↓
Improving Managerial, Analytical and Technological Capacities
↓
Mobilizing Information and Communication Channels
↓
Building Partnerships and Mobilizing Resources

SYSTEM DESIGN



Distance Education

Problems in supplying basic and school level education, such as those listed above in section B 4 may lead educators and planners to look at distance education as a potential solution. The reasons for establishing expectations and objectives of a country-wide distance education system, a pilot project, or a single institution need to be explicit and well thought out. Types of students must be clearly identified, and curriculum specified.

The rationale may be to increase access, improve retention rates, extend coverage, provide alternatives for squeeze out students, opportunities for adults, to remedy teacher shortage, improve quality of teaching, to supplement conventional face to face education, reduce costs per student etc.

If it is decided to initiate a distance education system or to extend and revitalise existing distance education provisions the reasons and expectations can be spelt out. Procedures for gaining understanding and commitment of Government, officials in ministries, educators, and communication agencies must be established. When the rationale is clear, stated and accepted, particular models of distance education can be considered to see how appropriate they are to the population, culture, state of communications.

Multi-National Regional Planing Process

Possible Procedure: The following outlines a possible procedure for establishing productive dialogue between distance educators and state educators with the aim of developing distance education or multi-channel approaches to meet one or more country's specific school level, basic vocational or community educational requirements.

Visits to each state
Organisers explain idea, objectives and procedure and pre-workshop action

↓

Regional Planning Meeting: 2 days
Distance educators and state educators plan pre-workshop and workshop activities

↓

Regional Workshop: 8 days
Distance educators and state educators dialogue, action programme and follow-up.

These stages are expanded below.

Setting-Up Basic Distance Education Projects

In setting-up distance education projects in a particular country the government and education administrators will need to establish their priorities, aims and objectives. It will also be necessary for them to be made aware of some of the possibilities of distance education and what it can do in certain situations.

Often it is difficult for government education officers to identify:

- what it is that they want
- what their choices will cost
- what is possible in their country, culture and with the resources available
- what will work successfully in their societies.

It is often difficult for distance educators to ask the appropriate questions of these government officers, or even how to ask the questions so that they have the intended meaning and will elicit an informed response.

It may take some time for the negotiating parties to come together, understand each other and reach agreement on what can be done, what prerequisites have to be met, what each other's responsibilities are.

Distance education is a particularly appropriate education delivery mode to provide bridging courses between basic level and technical/vocational, certificate and preliminary education. It can be a very cost-effective method of delivering education.

Regional Workshop:

i Information presentation by participants from each state. Identification of areas within their education system where distance education may be useful at the school, basic vocational and community education levels, and for bridging and foundation courses.

ii Presentation by participant nations already actively working on bridging/foundation course developments between basic and vocational/technical, certificate and preliminary level education.

iii Identification of distance education systems, resources, and expertise available which may be usefully adapted and developed to suit individual countries;

iv Review of present mutual development projects such as curriculum support at secondary level, education function performed, and degree of success;

v Development of cooperative arrangements or joint ventures in distance education between distance educators and individual nations which would focus on the following levels:

school;
basic vocational;
community education

by providing bridging courses between basic level education and technical/vocational, certificate and preliminary education.

vi Identification of methods of implementation; and associated costs.

Specific outcomes and developments could include:

- establishment of distance education partnerships for the provision of school, basic vocational, community education, bridging and foundation courses;
- distance education concurrently supplementing face to face education, which may be appropriate for students/teachers from basic level education to senior secondary,vocational/technical levels;
- distance education maintaining and extending education available, which may be appropriate in providing bridging courses from basic level to vocational/technical, through community education initiatives;
- identification of specific distance education initiatives which could promote the access of girls and young women into science and technology education;
- supply of distance education materials at school, basic vocational and community education levels for immediate use or for adaptation;
- advice/provision of training in distance education techniques, focused on the education levels already outlined;
- assistance in developing, writing or adapting courses at the education levels already outlined, which may be suitable either for individual countries, or the region as a whole;
- assessment and evaluation of distance education courses/resources.

Expected Outcomes

- Alert state educators and governments to the capabilities of distance education in furthering some of their education aims;

State educators will:

i Survey the state of:

a school level

b basic vocational

c community

education, its coverage and quality in each participating nation, devise a framework for collecting, processing and analysing data about each of these levels of education to provide a baseline from which to identify needs and goals, and from which progress towards these goals may be measured.

ii Identify areas of:

a school level

b basic vocational

c community

education which need development to reach the standard of national education goals. Establish priorities for these goals.

iii Describe, discuss and evaluate existing educational projects that use a variety of communication media, distance education, conventional schooling, and formal and non-formal education methods.

iv Report on the perceived potential of distance education to help meet identified national education goals by paralleling, supplementing or complementing conventional face-to-face education.

v Identify distance education, approaches and expertise that are relevant and applicable to their educational needs and priorities. Propose and work out specific practical projects in their countries involving these distance education methods.

vi Explore and report on the potential for linking groups of Pacific nations having similar education environments and goals in joint ventures developing resources, sharing technology and expertise.

vii Identify priorities where existing funding and resources enables immediate implementation of joint ventures/partnerships in distance education;

viii Identify developmental projects/joint ventures which require additional funding/resources for implementation; and possible sources of funding /resources.

ix Develop a programme for assessing, monitoring and reporting on educational outcomes and standards of student achievement of implemented projects involving distance education.

x A report of the planning meeting and workshop incorporating:

- papers from each participating nation covering expected outcomes i to iii
- discussions and proceeding of the planning meeting and workshop and cover expected outcomes iv to ix

- issues and problems requiring further investigation
- proposed follow-up activities in each participating nation and collective regional initiatives.

Efficiency and Monitoring Systems

Distance education can be very effective and efficient but can also be ineffective and inefficient. Because of the size and complexity of many distance education systems there are many opportunities for malfunction, duplication, lack of co-ordination and other inefficiencies. Economics of scale are very possible in distance education, but only if the system and subsystems work smoothly and are well articulated.

Regular monitoring of the way each of the subsystems is working is essential. Monitoring should be consistent with the objectives of the subsystem and of the institution or system as a whole.

Part of this monitoring involves collection and analysis of key data. It is important that the data be routinely collected and that it provides a reasonable picture of reality. To be useful in making decisions data must be:

- relevant
- easily collected and recorded
- progressively updated
- consistent
- comprehensive
- easily accessed.

Monitoring data might include student enrolment information, staff and human resources, stock levels and control, accounts and financial reports. Examples could be:

- information about despatch and arrival of student work
- student work processed in each department per week.
- work not processed and still in the institution
- information about each student's assessment and achievement.
- turnaround time of student work.

Examples of computer menu screens to access information are shown.Appropriate information, analyses of data and reports should be available to staff who have responsibility for efficient functioning of subsystems.

It is also helpful if there is an established meeting and communication network so that the various subsystems are adequately co-ordinated and work in concert.

```
                    Correspondence School Information Systems
20/03/92                                                          SYS/SYS/002
                      ***  S Y S T E M   M E N U  ***              SYSMenu

1 Enrolment registers                          21 Mail transactions

2 Student enquiry system                       22 Bulk Store/Resources
                                               23 Central Despatch Stock Control
3 Student archives                             24 Print co-ordinator
                                               25 Wordprocessor supervisor
Management support -
4 Director                                     26 Business Unit
5 Department/Section Heads
6 Adult Open Learning Service                  27 Library system
7 Schools Open Learning Service
                                               28 Accounting system
8 Regional Representatives
                                               29 Human resources system
9 Correspondence School Units
                                               30 Department/teaching records
10 Data Entry maintenance
11 Utilities                          < Selection      >
```

```
                    Correspondence School Information Systems
20/03/92                                                          SYS/TCH/002
                  *** STUDENT ENQUIRIES - Fulltime Secondary ***     FMLOOK

 1 Name                      2 Dean list              3 Form teacher list

 4 Summary                   7 Profile                10 Past qualifications
 5 Work details              8 Comments               11 Qualification entry
 6 Mail dates                9 History

12 Family name              15 Visits                 18 Dean formgroups
13 Family profile           16 Camps                  19 Groups by level
14 Previous address         17 Course changes

20 RR Itineraries           22 Course rolls           23 This week's enrols
21 RR Students                                        24 This week's withdraws

25 Selected student lists

26 Student work in school                  < Selection :      >

(O)ff   (R)esources  (A)OLS   (S)OLS   (P)rimary   (G)eneral  (E)arly Childhood
```

AOLS - Adult Open Learning Service
SOLS - Schools Open Learning Service
RR - Regional Representatives

Conclusion

There are many diverse reasons for establishing a distance education system. Each system is designed to meet particular needs and achieve specific goals in a unique country, culture and situation.

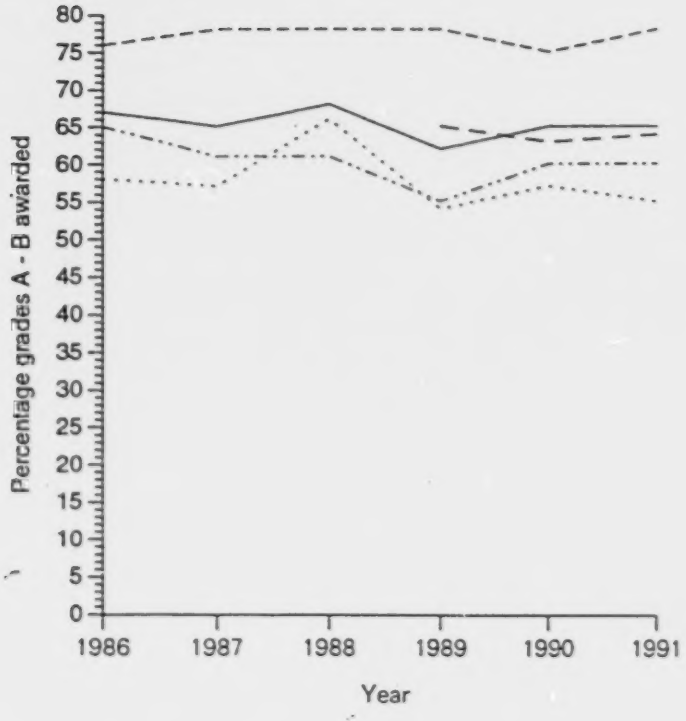
There is no single perfect distance education system that can be established successfully to teach at every level everywhere.

There are principles that underlie good system design There is also a lot of accumulated knowledge and experience around the world and anyone planning and designing a distance education system would be wise not to try to reinvent the wheel, but to benefit from the experience of others.

As well as studying the literature and issues discussed in this and other papers and books, it may be wise to study distance education systems that appear to have similar objectives in similar situations. It may also be appropriate to involve knowledgeable and empathetic experts to assist in planning, designing, implementing and monitoring a distance education system.

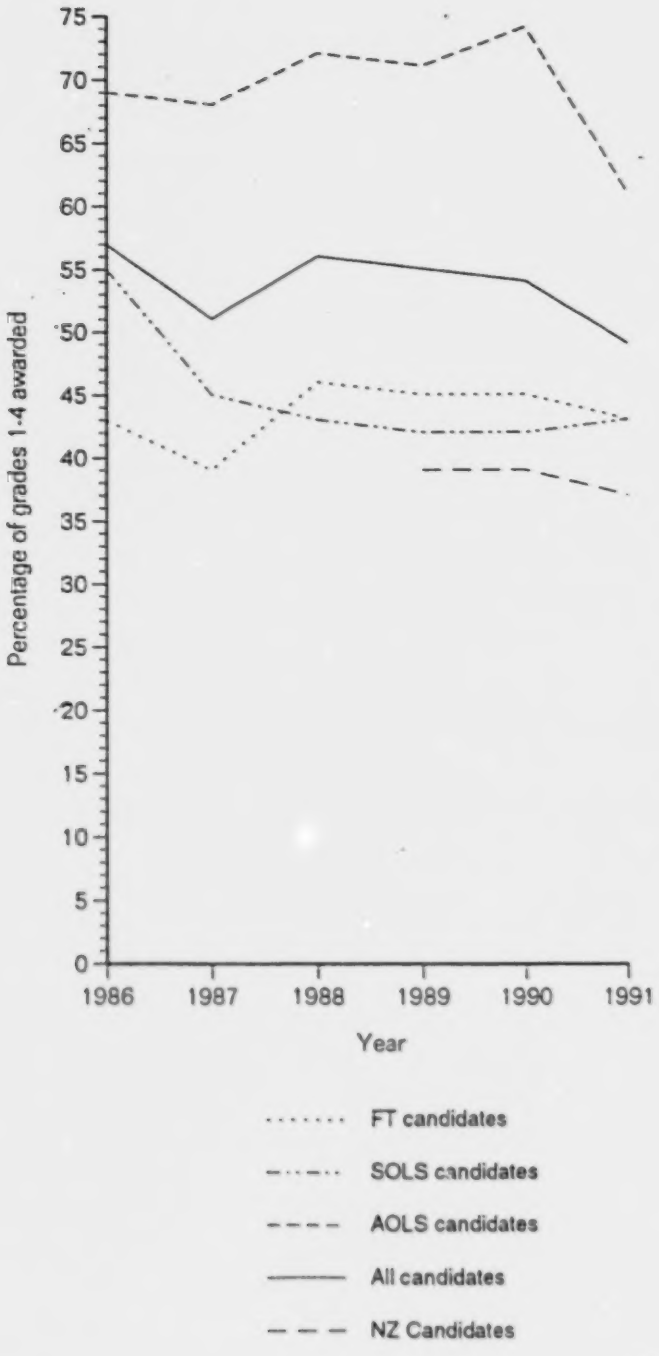
SCHOOL CERTIFICATE EXAMINATION

Percentage of grades A - B awarded
1986-1991



SIXTH FORM CERTIFICATE

Percentage of grades 1 to 4 awarded 1986 - 1991



From the mother of a full-time student
I am writing to thank the Correspondence School for the year my daughter spent with you. I feel she has learnt more in one year than she did in two years at her other school. I regret her leaving and we tried to get her to stay on. I think she will wish she had as years go on. However, she has some lovely memories of the school camp and the days at Coromandel.

From the parent of a full-time student
N—— is thriving at the Intermediate School and is well and truly up with his peers academically (which proves Correspondence was certainly beneficial in his case). He is so enthusiastic with his lessons, with every day being a real adventure for him.

From the parents of a full time student
My husband and I would like to thank The Correspondence School for the support given to our son during his short time enrolled with you. It has given him a sense of fulfilment and self-esteem that had become lost. We congratulate you all as being a great team of caring people and teachers. Our grateful thanks to you all.

From the parents of full-time students
We wish to thank the Correspondence School most sincerely for the time and effort put into our boys' education. Both of us being teachers appreciate the work involved in organising and running the programmes you have offered our boys. We were both very impressed with the quality of programming, methods of contact and work, and the interest and dedication of the teachers involved.

From the mother of a full-time student
I can't express just what a positive effect the Correspondence School has had on her self-confidence (and, indeed, it has been the only way she could have carried on her schooling at all over the past two years). The quality of the sets, the calibre of the teaching and, above all, the warmth and encouragement of the staff, has been truly wonderful. N—— and A——, in particular, have given so much of themselves, above and beyond the call of duty, and their wisdom and intuition and inspired sharing skills have helped S—— through some very sticky times and revived her joy of living.

From the parent of a full-time pupil

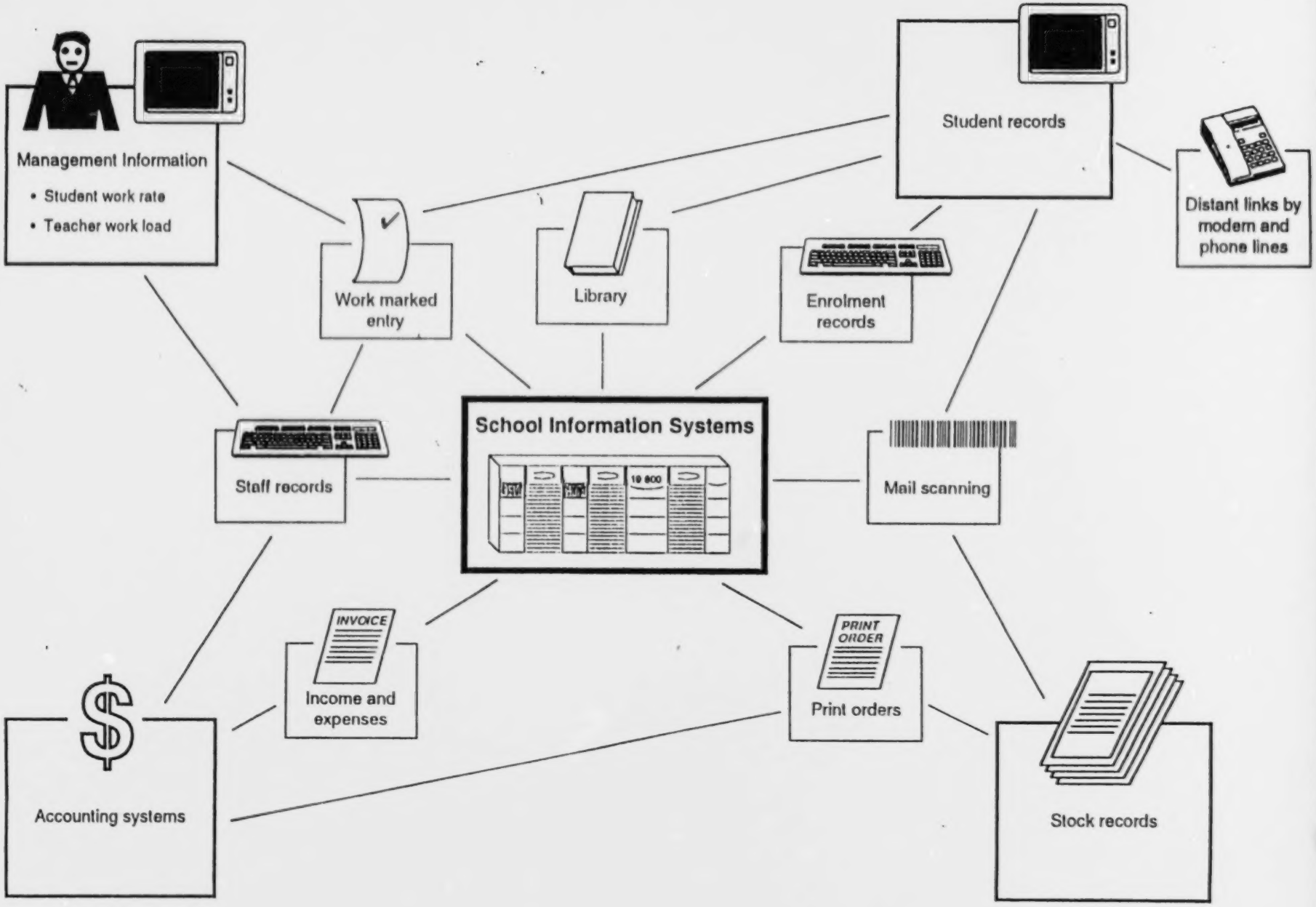
May I take this opportunity to express the thanks of our family for the time, trouble and care taken by M——'s teachers in form 3. My wife and I are particularly grateful for the encouragement given him at a time when he may be tempted to feel that he has no more use for education. After unavoidably falling behind in school (owing to a mixture of languages and changes of homes), I feel M—— is slowly starting to make progress under your guidance. He still needs a lot of help, and I have now realised that Correspondence School is also a full-time job for parents, but he is slowly becoming more independent. Thank you very much and please pass our appreciation on to the staff for the fine job they are doing.

From the parent of an Early Childhood student

I received the final posting today. R—— was delighted as he hoped he would receive one more. Thank you for all your work. R—— has enjoyed himself. I'm pleased to see that even though he hasn't been to playcentre or kindergarten, he is academically and socially ready for school. With printing/reading/maths/numbers, he is probably ahead of others at the same age, so the correspondence must have been doing a good job.

From a Secondary School Teacher

A further comment of interest was that made relating to the students' attitude toward taking subjects by correspondence - whereas it used to be that correspondence was seen as a second best option this is now no longer the case. Students have seen that those taking correspondence courses in previous years have achieved very good results - consequently the previously held image has been reversed and taking courses by correspondence is held in high regard.


Management Information
• Student work rate
• Teacher work load
Student records
Distant links by modem and phone lines
Work marked entry
Library
Enrolment records
School Information Systems
Staff records
Mail scanning
INVOICE
Income and expenses
PRINT ORDER
Print orders
Accounting systems
Stock records

The Correspondence School *Te Kura-a-Tuhi*

Private Bag Wellington New Zealand Tel (04) 473 6841 Fax (04) 471 2406
Director Ormond Tate Associate Director Alan Dodds

The New Zealand Correspondence School teaches 19,410 students in August 1992:

Primary:	all education at a distance, aged 5 - 13	1150
Secondary:	all education at a distance, aged 13 - 18	1450
Adult Open Learning Service:	1 or 2 subjects part-time, aged 16 upwards	8500
Schools Open Learning Service:	1 - 5 subjects secondary dual enrolment, aged 13 - 18	6650
Special Education:	mainly dual enrolments, aged 0 upwards	1150
Early Childhood:	aged 3 to 5	510

TOTAL COSTS per equivalent full-time student (EFTS), including operating and capital costs, all overheads, Goods and Services Tax, Accident Compensation, Government Superannuation levies, and capital expenditure have been:

Total Costs per Equivalent Full-time Student in $NZ

	1991	1990
Primary	$3295	$3224
Secondary	$3793	$3768
Adults, AOLS	$2775	$2884
Secondary Schools, SOLS	$2864	$3026
Special Education	$3259	$3185
Early Childhood	$2627	$2463
Average Cost/EFTS	$3024	$3072
Average Fixed Costs	$1381	$1331
Average Variable Cost	$1643	$1741

1991 Operating Costs per EFTS in conventional New Zealand State Schools (Not including capital costs or major maintenance)

Primary	$3100
Secondary	$4600
Early Childhood	$3236